UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte RUSSELL J. APFEL

Appeal No. 2006-2089
Application No. 09/778,291

ON BRIEF

Before RUGGIERO, BARRY, and HOMERE, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 1-25, which are all of the claims pending in this application. An amendment filed August 29, 2005 after final rejection was approved for entry by the Examiner.

The claimed invention relates to the performance of a gain/bandwidth control process based on the monitoring of a transmitted signal. As part of the gain/bandwidth control process, a gain of a portion of the transmitted signal is controlled based upon a determination of the bandwidth requirement of a signal path associated with the portion of the signal.

Claim 1 is illustrative of the invention and reads as follows:

1. A method of improving at least one gain bandwidth path, comprising:

monitoring at least one signal being transmitted; and

performing a gain/bandwidth control process based upon said monitoring of said signal,

performing said gain/bandwidth control process comprises controlling a gain of a

portion of said signal based upon determining a bandwidth requirement of a signal

path associated with said portion of said signal.

The Examiner relies on the following prior art:

Shenoi et al. (Shenoi)	6,507,606	Jan. 14, 2003 (effectively filed Mar. 29, 2000)
Shapiro et al. (Shapiro)	6,870,888	Mar. 22, 2005 (filed Nov. 23, 1999)

Claims 1-25, all of the appealed claims, stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Shenoi in view of Shapiro.

Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the Briefs[1] and the Answer for the respective details.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the Examiner and the evidence of obviousness relied upon by the Examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellant's arguments set forth in the Briefs along with the Examiner's rationale in support of the rejection and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the obviousness of the invention as recited in claims 1-25. Accordingly, we affirm.

[1] The Appeal Brief was filed December 12, 2005. In response to the Examiner's Answer mailed February 8, 2006, a Reply Brief was filed April 14, 2006, which was acknowledged and entered by the Examiner in the communication dated May 10, 2006.

As a general proposition in an appeal involving a rejection under 35 U.S.C. § 103, an Examiner is under a burden to make out a prima facie case of obviousness. If that burden is met, the burden of going forward then shifts to Appellant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by Appellant have been considered in this decision. Arguments which Appellant could have made but chose not to make in the Briefs have not been considered and are deemed waived [see 37 CFR § 41.37(c)(1)(vii)].

Appellants' arguments in response to the Examiner's 35 U.S.C. § 103(a) rejection assert a failure to establish a prima facie case of obviousness since all of the claimed limitations are not taught or suggested by the applied prior art references. After careful review of the disclosures of Shenoi and Shapiro in light of the arguments of record, we are in general agreement with the Examiner's position as stated in the Answer.

Appellant's arguments (Brief, pages 11-20; Reply brief, pages 2-5) focus on the contention that Shenoi does not make up for the deficiencies of Shapiro in disclosing the gain adjustment of a portion of a signal path based on a determination of the bandwidth requirement of a signal path. We simply find no error, however, in the Examiner's finding, as articulated at pages 4 and 11-15 of the Answer, that Shenoi does disclose the control of the gain of a signal portion based on a bandwidth requirement. We further find no error in the Examiner's conclusion (Answer, page 4) that the ordinarily skilled artisan would have been motivated and found it obvious to apply the gain control/bandwidth determination features taught by Shapiro to the system of Shenoi in order to maximize the amount of information transmitted over a channel as taught by Shapiro.

With respect to independent claims 1, 12, and 24, we also make the observation, from our own independent review of the disclosure of Shenoi, that, in our view and Appellant's arguments to the contrary notwithstanding, Shenoi in fact discloses the gain control of a signal portion based on a determination of the bandwidth requirements of the signal path associated with the signal portion as presently claimed. For example, as disclosed at column 8, lines 3-24 and illustrated in Figure 4, Shenoi discloses the monitoring and the control of the gain of the separated upstream and downstream signal channels which have

different bandwidth requirements. This gain control compensates for the attenuation in the 6000 feet of cable length at the middle band frequency of each channel, i.e., 600kHz for the downstream channel and 27 kHz for the upstream channel. In other words, the gain for each of the downstream and upstream channels is adjusted based on a characteristic (a cable attenuation characteristic in Shenoi's particular fact situation) of the required frequency bandwidth for each channel, i.e., 20 kHz to 80kHz for the upstream channel and 160kHz to 1.1 MHz for the downstream channel. In view of the above discussion and analysis of the disclosure of the Shenoi reference, it is our opinion that, although we found no error in the Examiner's proposed combination of Shenoi and Shapiro as discussed supra, the Shapiro reference is not necessary for a proper rejection of independent claims 1, 12, and 24 since all of the claimed elements are in fact present in the disclosure of Shenoi. A disclosure that anticipates under 35 U.S.C. § 102 also renders the claim unpatentable under 35 U.S.C. § 103, for "anticipation is the epitome of obviousness." Jones v. Hardy, 727 F.2d 1524, 1529, 220 USPQ 1021, 1025 (Fed. Cir. 1984). See also In re Fracalossi, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982); In re Pearson, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974).

For the above reasons, since it is our opinion that the Examiner's prima facie case of obviousness has not been overcome by any convincing arguments from Appellants, the Examiner's 35 U.S.C. § 103(a) rejection of independent claims 1, 12, and 24, as well as dependent claims 2-5 and 13-16 not separately argued by Appellant, is sustained.[2]

We also sustain the Examiner's 35 U.S.C. § 103(a) rejection of claims 6-11, 17-23, and 25, grouped and argued together by Appellant, based on the disclosure of Shenoi alone. We refer to our earlier discussion of Shenoi and further find that, in addition to determining the bandwidth requirement of a signal path and applying an appropriate gain to the signal path, Shenoi also discloses (column 8, lines 3-24) the determination of the

[2] Although Appellant's arguments focus on the contention that the applied references lack a teaching of controlling gain of a signal portion based on a determination of bandwidth requirement, independent claims 12 and 18 merely require the separation of signal paths "based upon at least one characteristic" and applying a corresponding gain to the signal paths, a feature disclosed by Shenoi at column 8, lines 3-24.

approximate length of the signal path. Further, since Shenoi discloses, at the very least, the separation of signal paths, i.e., downstream and upstream paths, dependent on bandwidth requirement, the claimed requirement (claims 6 and 25) of separating signal paths in response to "at least one of" signal path length, bandwidth requirement, and gain factor is satisfied.

In summary, we have sustained the Examiner's 35 U.S.C. § 103(a) rejections of all of the claims on appeal. Therefore, the decision of the Examiner rejecting claims 1-25 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv)(effective September 13, 2004).

AFFIRMED

JOSEPH F. RUGGIERO)
Administrative Patent Judge)
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